

Rancho La Costa Habitat Conservation Area

A Dedicated Natural Open Space System Set Aside As Part
of the La Costa Villages and University Commons Developments
which also includes the “Nelson” parcel.

Annual Report
October 2003 - September 2004

Prepared for:

U.S. Fish and Wildlife Service
California Department of Fish and Game
City of Carlsbad
City of San Marcos

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INTRODUCTION

This report summarizes the management activities carried out at the Rancho La Costa Habitat Conservation Area (HCA) by the preserve manager from October 1, 2003 to September 31, 2004. The HCA was created by combining several areas which were dedicated to the Center for long term management from the La Costa Villages and University Commons developments. Specific parcel names have been referred to as the Oaks, Ridges, Choumas-Pappas, Questhaven and Greens for La Costa Villages; Huff, Setter, Wilern, Brouwer, Elfin Forest, “on-site”, Frank’s Peak, Pfau and Winston for University Commons and the Nelson parcel.

From February to about June, 2002, the Center received title to the Oaks, Ridges, Huff, Setter, Wilern and Brouwer parcels. The Center is currently in escrow for the “Greens” property, the Questhaven parcels, the Choumas-Pappas parcels, Frank’s peak and pfau, and the “on-site” conservation parcels of the University Commons project. The Nelson property was deeded to the Center in 2001, and the endowment was received in July of 2004 from the National Fish and Wildlife Foundation. Management activities reported in this document refer to activities undertaken on all properties except for Frank’s Peak, Pfau, Winston and “on-site” properties of the University Common project. Management of these parcels will commence as soon as title is transferred to the Center.

The Preserve is located approximately 2 miles inland from the Pacific Ocean and lies between El Camino Real, near Palomar Airport Road and Elfin forest. (see Figures 1 and 2). The Preserve consists of several parcels separated by roads, homes, golf courses and other developments. Parcel sizes range from a few acres to over 500 acres. Vegetation communities include Diegan coastal sage scrub, chaparral, sycamore/oak woodland, willow woodland, native and non-native grassland, and disturbed areas.

The tasks and objectives discussed below are those derived from the *Habitat Management Plan for La Costa Preserve*, prepared by the Center for Natural Lands Management (Center) in August 2001 and approved by the U.S. Fish and Wildlife Service and California Department of Fish and Game. No management plan has been created for the University Commons or Nelson parcels. However, a revised management plan for both the La Costa and University Commons habitat conservation areas (collectively “Rancho La Costa”) will be prepared once all properties and endowments have be received by the Center.

Management of the Preserve includes signing and maintaining fences and gates (capital improvements), biological surveys, habitat restoration, public services and reporting. Each of these activities and their Year 2003-4 results are summarized below and fully described within this report.

SUMMARY

- 17 pair and 3 single male coastal California gnatcatcher were observed during bird surveys. Of the 20 CAGN territories, 17 were on properties within the City of Carlsbad (including off-site mitigation properties located in the County of San Diego) and 3 were within the City of San Marcos (including off-site mitigation properties located in the County of San Diego).
- 36 bird point count stations were set up and monitored three separate times during the spring months. A number of other sensitive bird species were observed and noted.
- Herp pit-arrays were monitored for 4 one-week periods.
- Research was conducted on the prey base of the San Diego horned lizard.
- Pilot vegetation plots were created within the *B. filifolia* habitat.
- 200 Orcutt's hazardia were introduced into the Preserve.
- Signs were placed where appropriate within the Preserve.
- Non-native plant species such as tamarisk, eucalyptus, castor bean, ice plant, mustard, acacia and pampas were removed.
- A public outreach brochure was distributed to about 700 neighbors.
- The Center spent considerable time and resources enforcing unwanted trespass.

CAPITAL IMPROVEMENTS

The Center replaced our Choumass-Pappas gate in 2004 as it was vandalized and destroyed. We rearranged the location of two of our large 4x6 wood signs, installed an additional one along Calle Junipero and posted smaller signs along the periphery of most of the HCA. All signs state that the site is a habitat conservation area, which activities are permitted or illegal, and provides the name and phone number of the Center. No other capital improvements were done during the year.

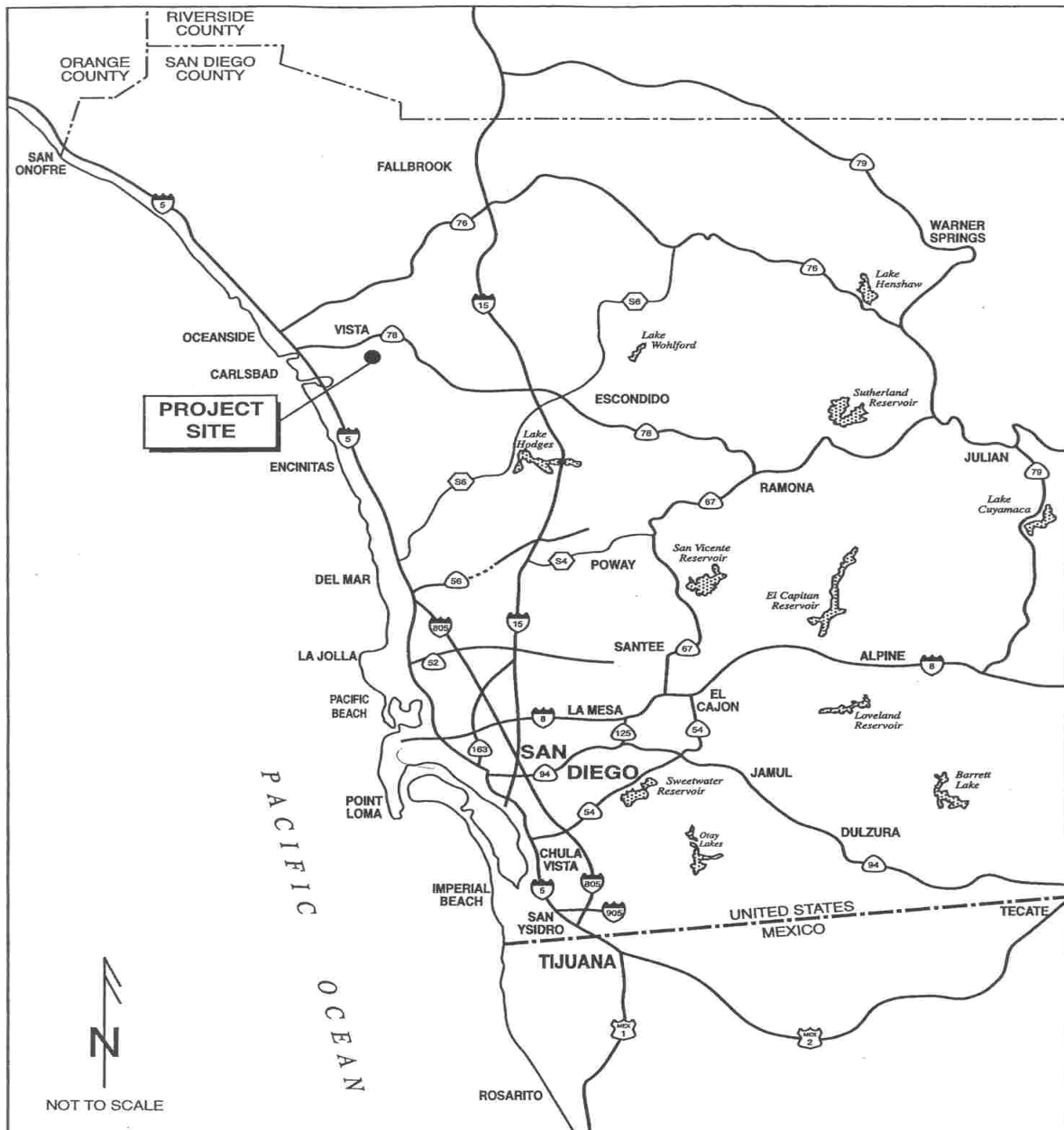
BIOLOGICAL SURVEYS

Year 2004 was the 3rd year of biological surveys carried out by the Center at the HCA. Previous surveys had been conducted by numerous biological consulting firms and are reported in the biological impact assessment reports and EIR's for the La Costa Villages and University Commons Open Space Areas.

The *Management Plan* outlines the goals of biological monitoring at the HCA. The general goal of the monitoring activities at the HCA at this time is to 1) collect baseline data and 2) begin to develop population trend data on individual species within the HCA, and for certain taxonomic groups and the vegetation community. This information will allow us to make better informed management decisions should an individual species or population be declining, or possibly increasing, in population size. It should also allow the Center to evaluate changes in the animal community as it correlates to changes in the vegetation communities.

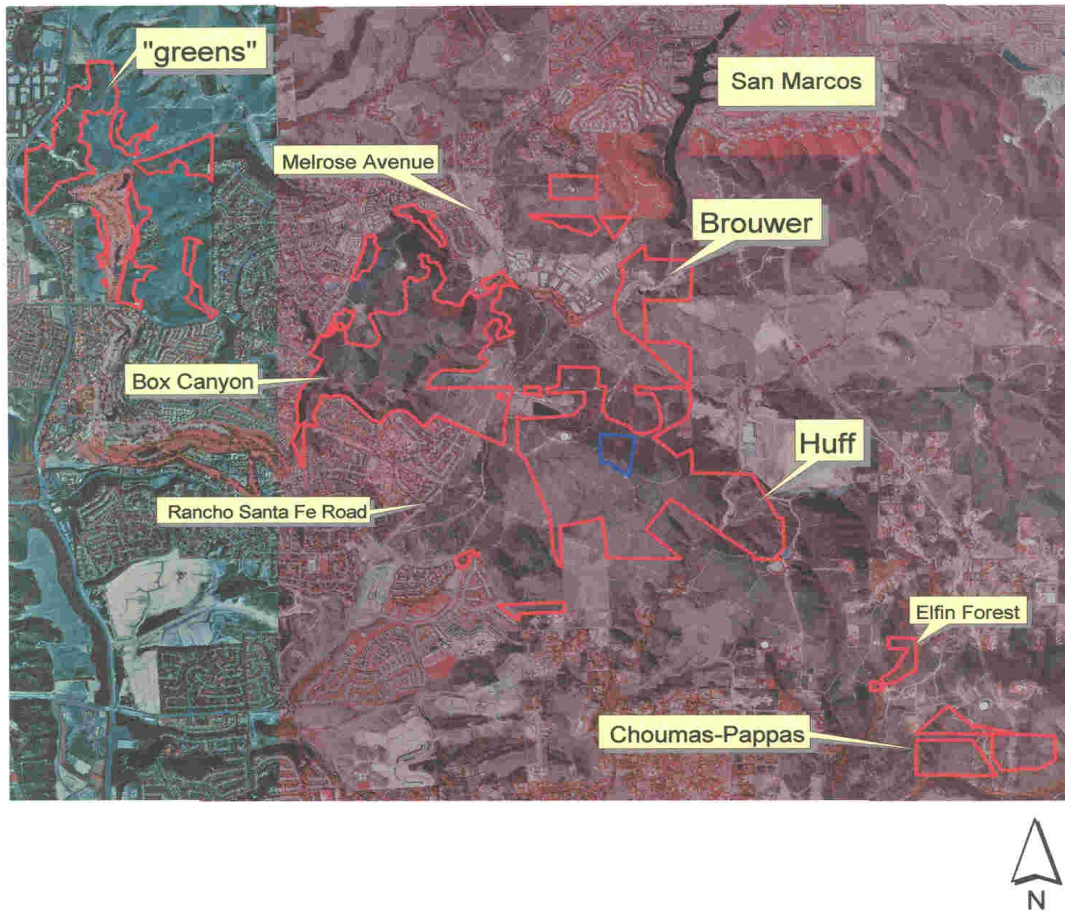
Monitoring in 2004 included general surveys (point counts) for the bird community, focused gnatcatcher surveys, reptile arrays, vegetation plots, and San Diego horned lizard research

activities.



Regional Location Map

Figure 1



 Rancho La Costa Preserve Boundary


 Not a Part of the Preserve Areas

Figure 2
Preserve Vicinity

Table 1 outlines survey dates, times, weather conditions and type of survey conducted. Unless noted otherwise, all surveys and monitoring activities were conducted by Markus Spiegelberg and Michael Hylton who are permitted by the USFWS and CDFG (USFWS PRT-787-924, Scientific Collectors Permit # 801106-05) for the gnatcatcher and for activities such as reptile arrays.

1. Reptile and Amphibians

Reptiles and amphibians were noted anecdotally during surveys for other taxa and during four 1-week pit array sessions (Table 1). In the winter of 2002-3, the Center installed 8 pit-arrays in various arrays of the HCA (see Figure 3 in the 2002-3 annual report). Each array has seven 5-gallon buckets separated by about 10 meters. Between each bucket there is a plastic tarp that stands about 16 inches high and acts as barrier and guide so that reptiles and amphibians walk along them and fall in the buckets. Each array also has 4 snake traps. Buckets were opened every Monday of each session and closed by Friday (checked daily). All reptiles and amphibians captured this year were marked by toe- or scale-clipping. All small mammals were marked with ink. In addition, we collected ants to identify in the lab and recorded insect species that were captured.

Results of the 2004 pit array surveys, by array, is shown in Table 2. Notable species captured include coast horned lizard (*Phrynosoma coronatum*) and spade-foot toad (*Scaphiopus hammondi*). Other species captured include orange-throated whiptail (OTW, *Cnemidophorus hyperythrus beldingi*), western whiptail (*Cnemidophorus tigris*), side-blotched lizard (*Uta stansburiana*) and western fence lizard (*Sceloporus occidentalis*). A southern pacific rattlesnake (*Crotalus viridis*) was observed going into a bucket and then left when we approached. Of note is that we only caught OTW in one array (Array 1).

Reptile or amphibian species observed anecdotally include the red-diamond back rattlesnake (*Crotalus ruber*), southern pacific rattlesnake (*Crotalus viridis*), San Diego gopher snake (*Pituophis catenifer annectens*), California slender salamander (*Batrachoseps pacificus*), tree frog (*Hyla regilla*) and California whipsnake (*Masticophis lateralis lateralis*).

In 2004, we commenced some monitoring activities to learn more about the diet of coast horned lizards found on the property. Researches in San Diego (Dr. Suarez, Dr. Case and Dr. Fisher) have learned that the horned lizards are prone to extirpation due to the loss of their main prey item, harvester ants, which are displaced by the non-native Argentine ants. So, in addition to diet studies, we also collected information and began some pilot studies to address the issue of Argentine ant invasion. We conducted several pilot transects to count harvester ant colonies and we collected ants from pit-arrays. We also collected horned lizard scat and conducted some focused horned lizard surveys.

Table 1. Survey dates, times and weather conditions.

Survey Date	Time	Weather Conditions	Type of Survey*	Location (observer initials)*
February 10-14, 2004	morning hours	Generally clear, 0-5 mph wind, 50's and 60's °F during the day, night-time temperature in the mid to high 40's	Herp Arrays	
March 8, 2004	09:00 - 12:00	Clear, 0-7 mph, 78-82 °F	CAGN	Elfin Forest (MH)
March 9, 2004	08:00 - 11:30	Clear, 0-5 mph wind, 72-74 °F	CAGN	Choumass-pappas (MH)
March 18, 2004	08:00 - 11:30	Clear, 0-5 mph wind, 70-73 °F	CAGN	Elfin Forest (MH)
March 19, 2004	08:30 - 12:00	Partly cloudy, 0-10 mph wind, 65-70 °F	CAGN	Choumass-pappas (MH)
March 22, 2004	07:30 - 11:30	Partly cloudy, 0-2 mph wind, 60 -74 °F	CAGN	Choumass-pappas (MH)
March 30, 2004	07:40 - 10:40	Clear, 1-3 mph wind, 63-74 °F	CAGN	Elfin Forest (MH)
March 31, 2004	06:00 - 10:05	Cloudy, 1-5 mph wind, 55-63 °F	CAGN	Choumass-pappas (MH)
April 6-10, 2004	morning hours	Generally overcast in mornings to partly cloudy or clear past noon, calm winds, night time temps in high 40's, low 50's, day time to mid 60's.	Herp Arrays	
April 13, 2004	07:30 - 11:30	Overcast to clear, calm, 60-65 °F	APC	Plots 3 and 4 (MS)
April 14, 2004	07:15 - 11:30	Cloudy, 1-5 mph wind, 58-69 °F	APC	Plots 1 and 2 (MS)
April 19, 2004	07:00 - 11:30	Clear to partly cloudy, 1-5mph wind, 60-65 °F	APC	Plots 3 and 4 (MS)
April 22, 2004	07:15 - 10:45	Overcast, 0 - 7 mph wind, 58-65 °F	APC	Plots 1 and 2 (MS)
April 25, 2004	06:45 - 11:00	Clear, 1-5 mph wind, 62-75 °F	APC	Plots 3 and 4 (MS)
April 27, 2004	06:00-9:15	Clear, calm, 61-78 °F	CAGN	Greens (MH)
April 28, 2004	06:30	Foggy to clear, 1-4 mph wind, 58-75 °F	APC	Plots 1 and 2 (MS)

Survey Date	Time	Weather Conditions	Type of Survey*	Location (observer initials)*
May 4, 2004	06:30 - 8:30	Clear, calm 61-76 °F	CAGN	Greens (MH)
May 4, 2004	06:40 - 11:30	Clear, 0-4 mph wind, 60-65 °F	CAGN	Brouwer and Huff (MS)
May 10, 2004	06:15 - 11:30	Overcast to clear, 1-3 mph wind, 60-70 °F	CAGN	Plots 1 and 2 and surround areas in vicinity (MS)
May 11, 2004	06:00 - 11:00	Clear, 0-3 mph wind, 58-71 °F	CAGN	Plots 3 and 4 and surrounding areas in vicinity (MS)
		Generally a clear, mild week with slight breezes, temperature ranging from mid-50's at night to mid-70's during the day	Herp Arrays	
May 12, 2004	07:30 - 11:30	Clear, calm, 55-65 °F	General bird survey,	Box Canyon (MS)
May 12, 2004	1:30-3:30	Clear, calm, high 60's	Veg Plot	Greens (MS)
May 14, 2004	06:30 - 11:30	Clear, 0-5 mph wind, 61-81 °F	CAGN	Huff (MS)
May 15, 2004	06:00 - 09:00	Clear to partly cloudy, calm, 60-68 °F	CAGN	Greens (MH)
May 17, 2004	06:30 - 11:30	Partly cloudy, 0-3 mph wind 65-77 °F	CAGN	Plots 1 and 2 and surrounding areas in vicinity (MS)
May 18, 2004	07:00 - 12:00	Partly cloudy to clear, 0-4 mph wind, 62-72 °F	CAGN	Plots 3 and 4 and surrounding areas in vicinity (MS)
May 20, 2004	07:00 - 11:30	Partly cloudy, 0-2 mph wind, 62-72 °F	CAGN	Brouwer (MS)
May 20, 2004	06:00 - 09:00	Partly cloudy, 1-2 mph wind, 60-68 °F	CAGN	Greens (MH)
May 24-28, 2004	morning hours	Generally a partly cloudy week with calm breezes, temperatures ranging from low-60's at night to mid-70's during the day	Herp Arrays	
May 28, 2004	05:45 - 9:30	Partly cloudy, 0-4 mph wind, 62-69 °F	CAGN	Greens (MH)

Survey Date	Time	Weather Conditions	Type of Survey*	Location (observer initials)*
June 3, 2004	06:45 - 11:00	Overcast, 0-2 mph wind, 62-72 °F	CAGN	Brouwer and Wilern (MS)
June 4, 2004	05:45 - 9:30	Overcast, 0-4 mph wind, 62-74 °F	CAGN	Greens (MH)
July 7 & 8 2004	08:00 - 10:00	Overcast, calm, 68-78 °F	HA transect, HL scat	Various locations
July 26, 2004	07:00 - 08:00	Clear, calm, 65 °F	HL scat	Brouwer
July 26-30, 2004	morning hours	Generally a clear week, temperatures in low 60's at night to mid 80's during the day.	Herp Arrays	
September 8, 2004	08:30 - 11:30	Clear, 2-5 mph wind, 75-85 °F	HL Scat	Brouwer, Huff and Ridges

* CAGN = Directed survey for coastal California gnatcatcher. APC = Avian community point counts.
MH=Michael Hylton; MS= Markus Spiegelberg

During the summer of 2004 we collected 31 horned lizard scat and dissected them to determine their contents. Nearly all the scat were primarily composed of harvester ant (genus: *Messor*) parts which averaged around 90% of all species observed (per scat). Other species were mostly beetle, but one scat had two or three other ant species, (one is from the Genus *Crematogaster*). Complete data from these pilot studies is summarized in the Rancho La Costa Management Plan dated December 2004. Argentine ants were captured and identified in arrays 1, 6 and 7. As expected, Argentine's were abundant in Array 6, which is located in an area near to the edge of the preserve which has a high density of non-native grasses. Only a few Argentine ants were noted in Array's 1 and 7.

Table 2. 2004 herp array results.

	Number Observed/Array in 2004							
Species	1	2	3	4	5	6	7	8
Western spadefoot toad (<i>Scaphiopus hammondi</i>)			1					
Alligator lizard (<i>Elgaria multicarinatus</i>)		1			1	3		
Orange-throated whiptail (<i>Cnemidophorus hyperythrus beldingi</i>)	15							
Western whiptail (<i>Cnemidophorus tigris multiscutatus</i>)	1		4	1	2	0	1	5
Western skink (<i>Eumeces skiltonianus</i>)		2		1		3		
Coast horned lizard (<i>Phrynosoma coronatum</i>)	2		1*					
Western fence lizard (<i>Sceloporus occidentalis</i>)	5	9	9	11	9	9	11	8
Side-blotched lizard (<i>Uta stansburiana</i>)	5		2					
California kingsnake (<i>Lampropeltis getula</i>)							1	
Granite spiny lizard (<i>Sceloporus orcutti</i>)	1				1			1
Southern pacific rattlesnake (<i>Crotalus viridis</i>)		1			1			

* one additional adult horned lizard observed and marked during a bird survey near array 3.

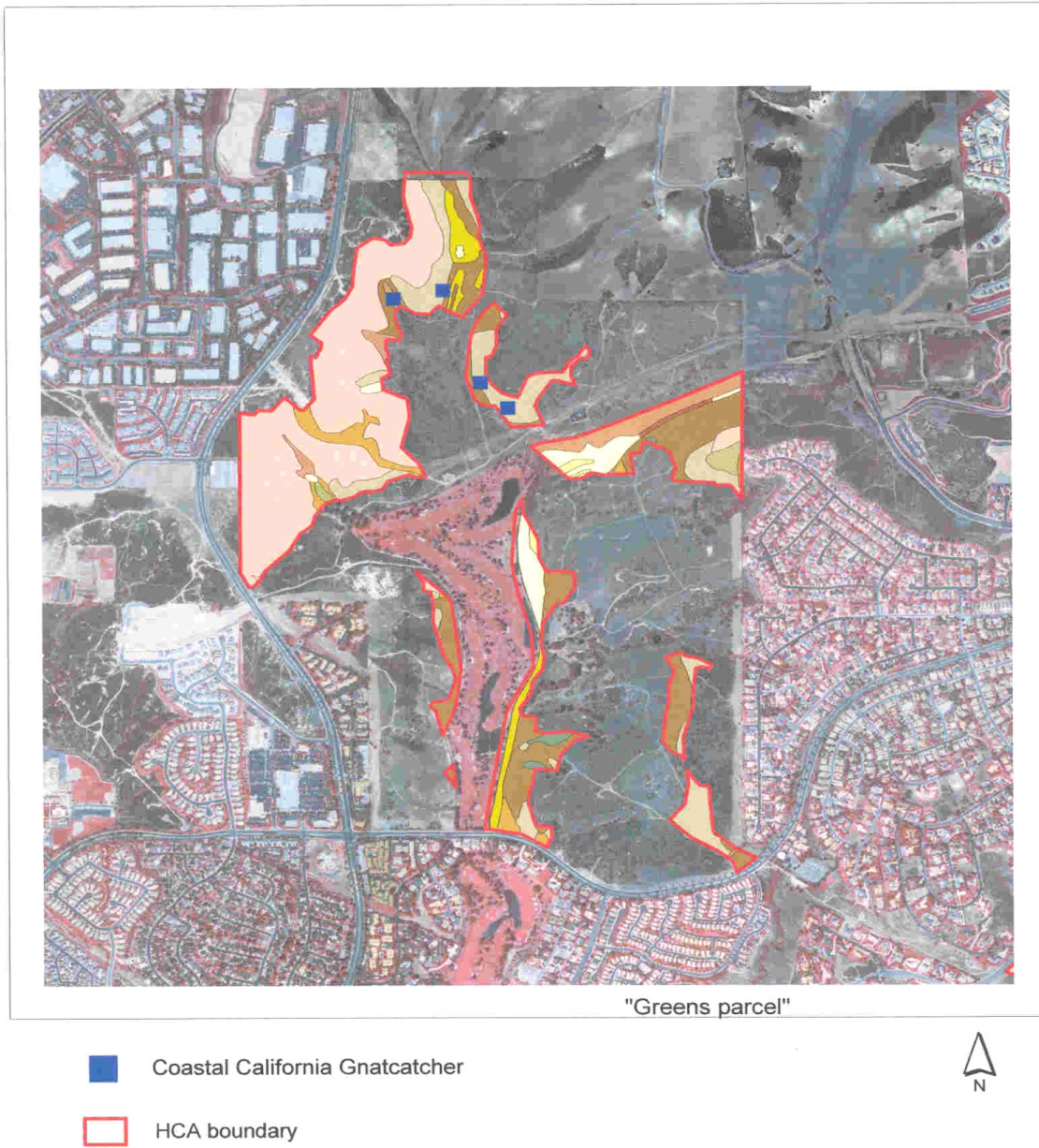
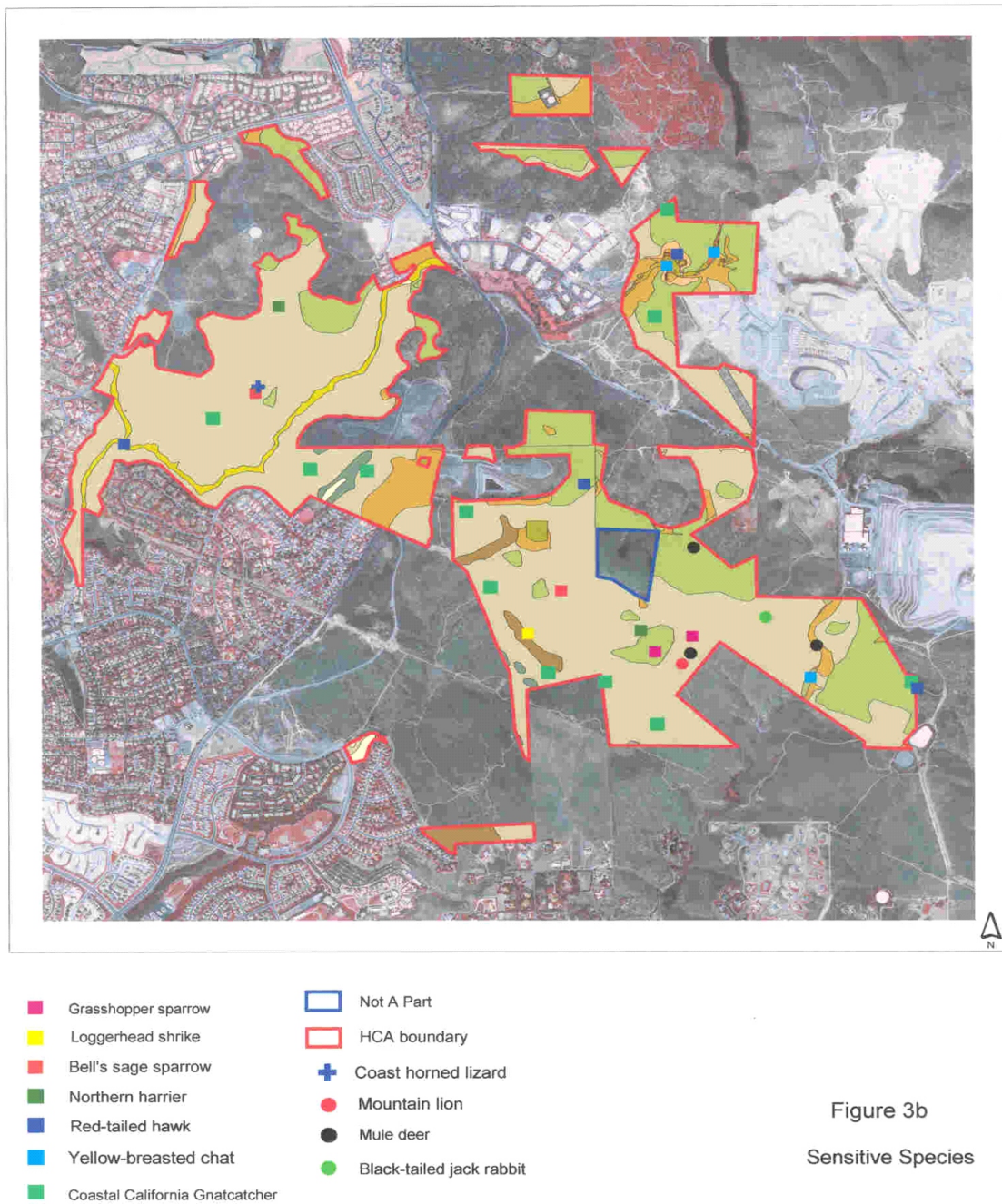
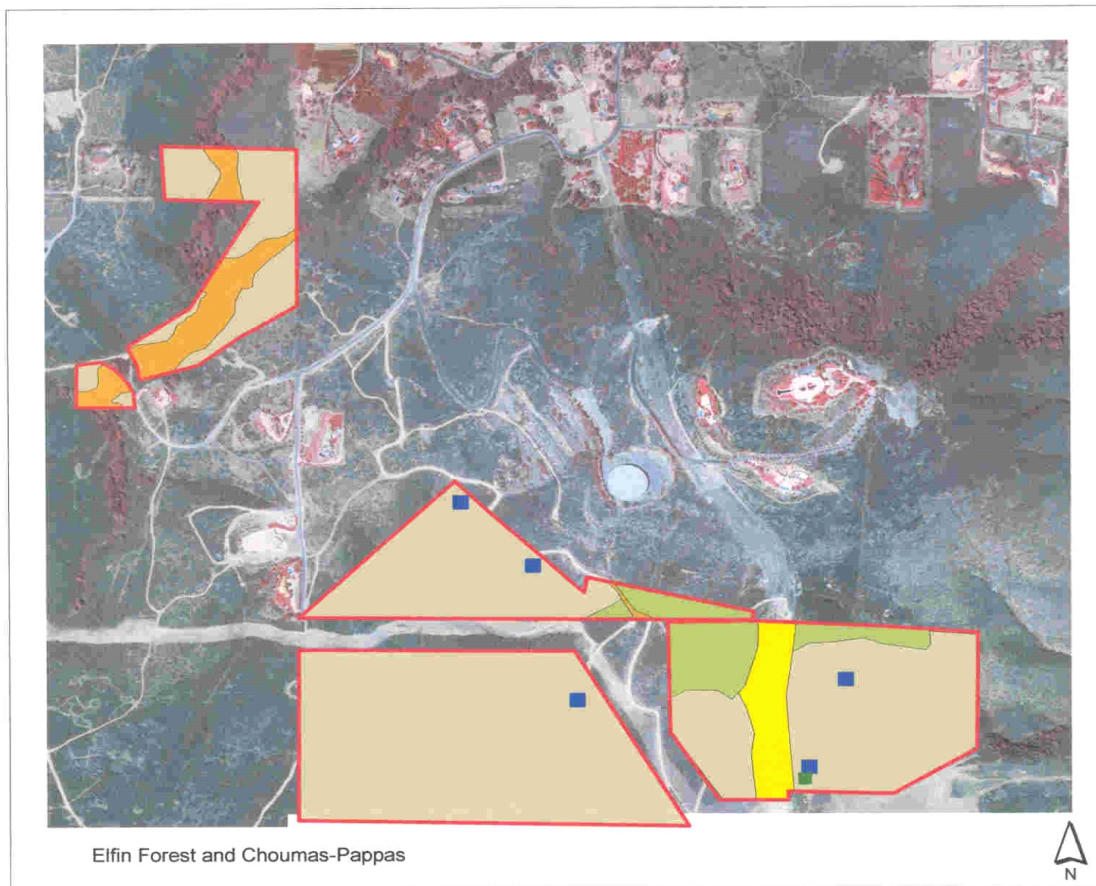


Figure 3a
Sensitive Species





- Coastal California Gnatcatcher
- Northern harrier
- Not A Part
- HCA Boundary

Figure 3c

Sensitive Species

2. Birds

The goal of bird surveys in 2004 was to determine the distribution and abundance of coastal California gnatcatchers, and to monitor and begin to collect data on the distribution and relative abundance of bird species using the HCA. In 2003, the Center set up six 50-acre units for bird studies (see Figure 5 in the 2002-3 annual report). The number of points in each unit was increased from 6 to 9, in 2004 and each point was separated by at least 75 meters (from the center). In 2004, only four of the units (all in CSS) were monitored. No time was available to monitor the chaparral units. Each bird point count location was visited three times during the spring for 10 minutes each visit (Table 1). The surveyor recorded all birds observed from 0-50 meters from the point in 0-3, 3-5 and 5-10 minute intervals.

In addition to the bird community surveys, we also conducted focused surveys for CAGN on all the property except for the University Commons on-site, Frank's peak and Pfau. The HCA was broken down into units of no more than 100 acres of suitable habitat. Within each unit we conducted three surveys separated by at least 7 days. It should be noted that noise levels from the surrounding development activities and roads were very high on several days which constrained our surveys at Choumass-Pappas, the Brouwer and the Oaks.

Surveys included mapping and noting particular behaviors of the coastal California gnatcatcher, and other sensitive bird species. Any nesting behavior or evidence of nesting or nesting success, was noted for all species. Taped vocalizations of gnatcatchers were used as necessary.

Survey results and notes for the first 3 minutes of survey time are listed in Appendix A, and sensitive and notable species are mapped on Figures 3a-c (except for the rufous-crowned sparrow which is so abundant that the map would be covered in dots). Sensitive species observed in 2004 include the gnatcatcher, rufous-crowned sparrow, grasshopper sparrow, loggerhead shrike, northern harrier, and Cooper's hawk. Other notable observations include four nesting pair of red-tailed hawk (see Figures 3a, b and c), and an osprey. Red-tailed nests were observed on a power pole on the eastern boundary of the Huff, within Box Canyon, in the cliff face of the Brouwer parcel and near the Denk water tank in the middle of the property, just east of Rancho Santa Fe Road. All nests had nestlings and fledges from all nests were observed during surveys.

All bird community data (i.e. from all time intervals) is currently being analyzed using Mark/Recapture. The results of this analysis will determine whether (1) the Center will continue using this methodology, (2) how many plots and/or points are needed to track meaningful trends in breeding birds.

Seventeen pair and three single gnatcatcher (CAGN) was observed within the survey areas (Figures 3a-c). Breeding activity and behaviors were noted for several gnatcatcher pairs, a few nests were found, and a number of family groups were noted across the property. Rufous-

crowned sparrows were very common throughout the HCA and noted on 34 of 36 point locations (and 33 of 36 points last year). They were also observed in areas that were not covered by point counts, such as the Elfin forest, Wilern and Choumass-pappas parcels.

Of the 20 CAGN territories observed in 2004, 17 were on properties within the City of Carlsbad (including off-site mitigation properties located in the County of San Diego) and 3 were within the City of San Marcos (including off-site mitigation properties located in the County of San Diego).

3. Mammals

No focused surveys for mammals were conducted in 2004. However, some small mammal species were captured in the reptile arrays. Small mammals captured include the gopher, western harvest mouse (*Reithrodontomys megalotis*) and shrew (*Notisorex crawfordi*). Other mammals observed during surveys include cottontail rabbit (*Sylvilagus audubonii*), coyote (*Canis latrans*), California ground squirrel (*Spermophilus beecheyi*) and mule deer (*Odocoileus hemionus*). A mountain lion was observed by a jogger and a scat likely to be a mountain was found near the Huff parcel.

4. Insects

Ants were collected from each bucket on each day of the herp array surveys. Ants were placed in vials of alcohol and sent to Tom Prentice at U.C. Riverside for identification. The following species were observed: *Linepithema humile*, *Dorymyrmex insanus*, *Solenopsis xyleni*, *Myrmecocystus testaceus*, *Messor andrei*, *Pheidole vistana*, *Crematogaster californica*, *Tapinoma sessile*, *Prenolepis imparia*, and *Camponatus* sp. As stated earlier, Argentine ants (*Linepithema humile*) were most abundant in Array 6, and rare in Arrays 1 and 7 and not found in the other arrays.

5. Vegetation Sampling

In 2003, the Center hired Scott McMillan to conduct vegetation sampling at each bird point count locations. At each bird point locations, Scott was contracted to place two 50 meter transects, one going south to north and the other east to west, across the point (i.e. the 25 meter mark of each transect is at the actual point location). At each transect, Scott was contracted to take measurements using the point intercept method. The goal was to estimate cover of all plant species and to start tracking the changes in composition as the Center removes non-native species from the HCA. Unfortunately, Scott did not start fulfil the contract obligations and was released from the job.

In 2004, the Center began some pilot studies on the Greens parcel where there are several thousand *Brodiaea filifolia*. Our goal is to quantify the cover of non-native and native plant species so that we can start non-native removal programs and evaluate their progress. We created a 15 meter X 15 meter stratified random plot with 5 randomly placed transects along one of the sides of the plot. Along each transect, we used the point intercept method and collected data every 0.5 meters (i.e. species hit). Then, along each transect, we placed randomized 0.25 x 0.5 meter quadrats every 1 meter. Within each quadrat we estimated percent cover of each species and counted the number of individuals in each quadrat. (*Bromus carinatus* was so abundant in each quadrat that we just estimated cover as counting each individual would have taken too much time). The predominant non-native in the one lense studied in 2004 (and others not studied) is *Bromus carinatus* (Table 3). Although some feel that this is a native species, it is somewhat irrelevant, as it cover over 70% of the lense areas and is a threat to *Brodiaea filifolia* and other natives in the lense areas. More plots will be studied during the next fiscal year, and if funds permit, thatch removal will occur in the summer of 2005. (It should be noted that rainfall was less than 6 inches in 2004, so the data in Table 3 most likely represent much lower cover or frequency that if there had been higher rainfall).

Table 3. Pilot Vegetation Plot Data (75 quadrats).

Species	Average % cover (stdev) point intercept	Average % cover (stdev) quadrats	Frequency (# of quadrats containing species)	Average number of individuals/ quadrat (stdev)
<i>Bromus carinatus</i>	80.6 (28.6)	73.07 (34.7)	69	100% cover= ca. 200 individuals
<i>Avena ssp.</i>		0.04 (0.1)	2	0.04 (0.06)
<i>Centaurea melitensis</i>	5.8 (8.0)	2.92 (2.9)	34	2.67 (2.52)
<i>Foeniculum vulgare</i>		0.67 (1.5)	1	0.01 (0.03)
<i>Hazardia squarrosa</i>	1.3 (1.8)	0.87 (1.9)	1	0.01 (0.03)
<i>Hemizonia fasciculata</i>	11.0 (15.6)	3.16 (5.1)	34	2.43 (3.42)
<i>Calystegia macrostegia</i>		0.16 (0.3)	2	0.03 (0.04)
<i>Plantago erecta</i>		0.07 (0.1)	1	0.09 (0.21)
<i>Anagalis arvensis</i>		0.52 (0.8)	7	0.12 (0.17)
<i>Sisyrinchium bellum</i>	1.3 (2.9)	1.11 (1.8)	5	0.16 (0.32)
Bare ground	9.7 (10.7)			
Duff		1.07 (2.4)	1	

6. Plant Species and Sensitive Plants

During 2003, the Center hired Scott McMillan to update or create a plant list for the entire HCA (Appendix C), except the Chomass-Pappas parcels, and to map and note the population sizes of sensitive plant species (Figures 5-8 of the 2003 annual report). The plant list was not provided in the 2002-3 annual report but is provided in this report.

In 2004, the only focused surveys were for *Brodiaea filifolia*, which was not observed because of low rainfall.

HABITAT RESTORATION

Habitat restoration goals for the HCA at this time include removing non-native plants and may in the future include other tasks. Most of the HCA is not overly disturbed by non-native plant species. However, there are several populations of pampas grass, eucalyptus, fennel, ice plant and other non-native species. Also, it should be noted that habitat restoration activities, which include non-native plant removal, will be conducted between 2003-2008 on the “Greens”, Brouwer and Huff parcels by Morrow Development and Brookfield Homes, the developers of the La Costa Villages and the University Commons Open Space.

In 2003-4 we eradicated about 100 pampas grass clumps, a few small Eucalyptus trees, and hundred's fennel clumps, about 2 acres of fountain grass (*Penisetum* spp.), about 1,000 mustard plants and various other non-natives (Appendix B).

PUBLIC SERVICE

CNLM public service activities include patrolling, community letters, nature walks and public education. In 2003-4, most of the public service activities at the HCA involved patrolling and enforcement and meeting with easement holders. Appendix B summarizes all site activities for 2003-4. At this time, the western portion of the HCA (Box Canyon) is posted as “No Trespassing”. This is either because the Center does not want people in the canyon area, or because access to the HCA requires people to cross over private land. The eastern portions of the HCA are open to the public for hiking and mountain biking, but no motorized vehicles or firearms are allowed.

The Center patrolled the HCA on a regular basis, sometimes during biological surveys and sometimes during directed patrolling efforts.

In general the HCA does not have an excessive amount of negative use by people in the area. Motorcycles are observed on occasion on the Huff property as the eastern boundary is not completely secure at this time, and people continue to cliff jump in Box Canyon. In 2002 we had numerous parties and bonfires near Box Canyon and on the Nelson property. We have not seen any evidence of these activities since early 2003 at these locations.

In 2004 we generated a brochure which was distributed to about 700 homes in the area. The brochure provided a map of the site, some background and contact information. We also tried to lead a nature walk, but no one attended.

REPORTING

Reporting activities include report writing, all data analysis, GIS, meetings and regional coordination, and photo documentation activities.

Data that has been entered into ARCVIEW GIS includes sensitive species locations, parcel boundaries, sensitive plant and animal locations, pit array locations and photo-documentation stations.

About 20 photo-documentation stations were set up in 2003 and digital photographs were taken in each location (Figure 3). Photo-documentation will resume in 2006 at these stations. A number of photo's were taken during the year of habitat enhancement projects and plants and wildlife observed.

At this time HCA management is following the guidelines established in the Habitat Management Plan for the La Costa HCA prepared by the Center in August 2001 and approved by the wildlife agencies. This Plan only address issues on the La Costa Villages open space areas, and not those on the other parcels. However, the goals are very similar and the management activities can occur simultaneously since the parcels are either adjacent or very near to one another. The Center has requested (separate from this document) from the CDFG and USFWS the permission to merge the accounting, reporting and management of all the parcels listed in this report. The Center was granted permission to merge reporting and therefore, will redraft the management plan to represent all properties as soon as all properties are deeded to the Center.

This report represents the third annual report for the HCA. An annual work plan for 2004-5 will be provided to the wildlife agencies in December of 2004.

Finally, the Preserve manager has maintained all necessary agency permits to allow the continued monitoring of the HCA's biota.

Budgets/Finances: The total 2003-4 expenditures for Nelson, La Costa Villages, University Commons and Elfin Forest (part of U.C.) was \$1,891, \$102,898, \$73,554 and \$5,824,

respectively. The University Commons expenditures included about \$45,000 in taxes which were paid in full by Brookfield Homes in the 2004-5 fiscal year. The total funds available (September 2004), including endowment and temporarily restricted funds, are \$81,593, \$1,454,295, \$254,079 and \$124,914 for the Nelson, La Costa Villages, University Commons and Elfin Forest projects, respectively. Brookfield Homes provided all remaining funds it owed to the Center in the 2004-5 fiscal year. This data will be provided in next years annual report.

SUMMARY & DISCUSSION

Management at the Rancho La Costa Habitat Conservation Area in the third year was successful at protecting the HCA from human encroachment, building baseline biological data, removing non-natives and developing a better understanding of the HCA and its regional context. HCA management in the fourth year will involve more biological surveys, non-native removal and public outreach. A detailed work plan for the Year 2004-2005 fiscal year has been developed for this purpose.

Appendix A.

2004 Bird Community Results

Point County Surveys	Average number of birds observed per plot per day during the 0-3 minute interval (9 points/plot)			
Species	1	2	3	4
American kestrel	0.3	0.0	0.0	0.3
Anna's hummingbird	8.0	4.7	1.7	8.3
Ash-throated flycatcher	0.0	0.7	0.3	0.3
Bewick's wren	4.0	3.7	2.7	1.3
Blue grosbeak	0.3	0.0	1.3	1.3
Bell's sage sparrow	0.3	0.0	1.3	1.3
Bushtit	0.3	1.7	2.0	2.3
California gnatcatcher	1.0	0.0	0.0	0.3
California quail	2.7	0.0	2.3	1.3
California thrasher	0.3	1.3	0.0	0.0
California towhee	7.0	7.7	9.3	4.7
Cliff Swallow	0.0	0.0	0.0	0.0
Costa's hummingbird	0.0	0.0	0.0	0.0
Common Raven	0.3	0.7	0.0	0.3
Common yellowthroat	2.0	1.7	3.3	0.3
Grasshopper sparrow	0.0	0.0	0.3	1.0
House finch	0.3	1.0	1.0	0.0
Lazuli bunting	0.3	0.0	1.3	2.0
Lesser goldfinch	1.0	1.7	4.7	1.7
Loggerhead shrike	0.0	0.0	1.0	0.0
Morning dove	2.0	0.7	1.0	0.3
Northern harrier	0.0	0.3	0.0	0.0
Northern mockingbird	0.7	0.0	0.0	0.0
Nuttall's woodpecker	0.0	0.3	0.0	0.0
Poor-whil	0.3	0.0	0.0	0.0
Rufous-crowned sparrow	6.0	4.3	5.3	6.0
Red-tailed hawk	0.3	0.3	0.0	0.7
Say's phoebe	0.0	0.0	0.0	0.3
Spotted towhee	3.7	2.3	4.7	2.0
White-crowned sparrow	0.7	0.0	0.0	0.3
Western kingbird	1.0	0.3	0.3	0.3
Western meadowlark	0.0	0.0	0.0	0.3
Western scrub jay	0.0	0.0	0.0	0.0
Wrentit	3.3	6.7	4.0	1.3
White-tailed kite	0.0	0.0	0.3	0.0
White-throated swift	0.0	0.0	0.0	0.3

Appendix B.

Summary of Site Visits

Manager	Date	Task	Hours Spent
Michael Hylton	10/1/03	Patrol Box Canyon	5.5
Markus Spiegelberg	10/1/03	Patrol greens	2.0
Michael Hylton	10/2/03	Patrol Box Canyon	1.5
Michael Hylton	10/3/03	Litter removal, patrol.	5.2
Michael Hylton	10/5/03	Patrol Box Canyon	2.0
Michael Hylton	10/7/03	Patrol Choumas	4.0
Michael Hylton	10/7/03	Patrol.	1.0
Michael Hylton	10/7/03	Litter removal, patrol.	1.0
Michael Hylton	10/8/03	Patrol	2.0
Michael Hylton	10/8/03	Choumas-Papas gate repair, litter removal, patrol.	1.5
Michael Hylton	10/16/03	Patrol Box Canyon and evict trespassers	1.0
Michael Hylton	10/16/03	Litter removal.	1.5
Michael Hylton	10/20/03	Patrol Ridges area including Box Canyon	2.0
Michael Hylton	10/21/03	Patrol Box Canyon	3.0
Michael Hylton	10/31/03	Patrol.	2.0
Michael Hylton	10/31/03	Patrol.	2.0
Michael Hylton	11/3/03	Site survey of the brouwer parcel	4.0
Markus Spiegelberg	11/3/03	Patrol	3.0
Michael Hylton	11/5/03	Photo-documentation, litter removal.	2.0
Michael Hylton	11/6/03	Pampas spraying and photodocumentation.	5.0
Michael Hylton	11/6/03	Patrol	1.0
Michael Hylton	11/11/03	Spray 10 pampas sprouts	2.0
Michael Hylton	11/13/03	Cut and spray about 20 pampas and tamarisk	5.5
Markus Spiegelberg	11/13/03	Assess Pampas issues at Greens	3.0
Michael Hylton	11/14/03	Patrol	3.0
Michael Hylton	11/14/03	Patrol	1.5
Michael Hylton	11/16/03	Patrol Box Canyon and evict 5 trespassers	2.0
Michael Hylton	11/17/03	Move boulders around edges of Choumas gate	6.0
Michael Hylton	11/17/03	Litter removal (refrig)	2.0
Markus Spiegelberg	11/17/03	Erect barricade at Choumass	8.0
Michael Hylton	11/18/03	CA Gnatcatcher training at Ridges.	4.0
Michael Hylton	11/19/03	Replace cut chain at Ridges	2.0
Michael Hylton	11/19/03	Litter removal	2.0
		Meeting with science director, preserve director and USFWS.	
Michael Hylton	11/24/03		5.0
Michael Hylton	11/24/03	Patrol Choumas	1.0
Michael Hylton	11/24/03	Patrol and litter removal. Choumas.	2.0
Markus Spiegelberg	11/24/03	Meet with USFWS	6.0
		Photo document choumas gate after it was destroyed	
Michael Hylton	11/26/03		2.0
Michael Hylton	12/1/03	Patrol and pick up trash at Choumas	4.0
Markus Spiegelberg	12/1/03	Trash pick up and patrol	3.0

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Michael Hylton	12/8/03	Greens tamarisk removal with Recon	8.0
Michael Hylton	12/9/03	Greens tamarisk removal with Recon	8.0
Michael Hylton	12/10/03	Greens tamarisk removal with Recon	8.0
Michael Hylton	12/11/03	Greens tamarisk removal with Recon	8.0
Markus Spiegelberg	12/11/03	Oversee tamarisk removal at Greens	5.0
		Patrol Box Canyon evict 2 boys firing guns into	
Michael Hylton	12/12/03	ponds	1.5
Michael Hylton	12/12/03	Patrol and sign Denning road	2.0
Michael Hylton	12/12/03	Patrol brouwer	1.0
Markus Spiegelberg	12/17/03	Patrol	4.0
		Patrol near Cadnencia park and check non-natives	
Michael Hylton	12/23/03	at western end of Box Canyon	3.5
Markus Spiegelberg	1/5/04	Patrol	3.0
Michael Hylton	1/12/04	Patrol and survey Greens	1.5
Markus Spiegelberg	1/12/04	Patrol greens	2.0
Michael Hylton	1/20/04	Fix gate at Choumas	2.0
Michael Hylton	1/20/04	Patrol Greens	1.0
Michael Hylton	1/26/04	Repair pit arrays.	4.0
Michael Hylton	1/26/04	Repair pit arrays.	4.0
Markus Spiegelberg	1/26/04	Fix herp arrays	8.0
Michael Hylton	1/30/04	Choumas gate inspection	1.0
Michael Hylton	2/2/04	Patrol central portion of preserve	1.5
Michael Hylton	2/9/04	Supervise dethatch work at Greens	1.5
Markus Spiegelberg	2/9/04	Herp array surveys	8.0
Markus Spiegelberg	2/10/04	Herp array surveys	8.0
Michael Hylton	2/11/04	Photo-document greens work	1.0
Markus Spiegelberg	2/11/04	Herp array surveys	8.0
		Spray fennel, fountain grasses, pampas eucalyptus	
Michael Hylton	2/12/04		3.5
Markus Spiegelberg	2/12/04	Herp array surveys	8.0
Markus Spiegelberg	2/13/04	Herp array surveys	8.0
Michael Hylton	2/23/04	Patrol elfin forest	2.0
Markus Spiegelberg	2/24/04	Measure orcutts hazardia	2.0
Michael Hylton	2/27/04	Patrol	2.0
Michael Hylton	3/4/04	Patrol elfin forest	4.0
Michael Hylton	3/8/04	Bird Survey elfin forest	4.0
		Meeting with neighbor regarding historical	
Michael Hylton	3/8/04	vegetation dumping and site boundary.	1.5
Michael Hylton	3/9/04	Bird Survey: Choumas-Papas.	4.0
Markus Spiegelberg	3/12/04	Bird survey. Patrol	7.0
Markus Spiegelberg	3/14/04	bird survey	7.0
Michael Hylton	3/18/04	Gate installation at Greens	2.0
Michael Hylton	3/18/04	Bird Survey elfin forest	4.0
Michael Hylton	3/19/04	CAGN survey at Choumas	3.0
Michael Hylton	3/22/04	CAGN survey at Choumas	3.0
Michael Hylton	3/22/04	Outreach with neighbors along Choumas road.	0.5
Markus Spiegelberg	3/22/04	patrol	4.0

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Michael Hylton	3/29/04	Mow mustard El Fuerte.	5.0
Michael Hylton	3/30/04	Replace boulders at Choumas gate.	2.0
Michael Hylton	3/30/04	Bird Survey elfin forest	4.0
Michael Hylton	3/31/04	CAGN survey at Choumas	4.0
Michael Hylton	4/5/04	Herp array surveys	4.0
Michael Hylton	4/5/04	Herp array surveys	3.0
Markus Spiegelberg	4/5/04	Herp array surveys	8.0
Michael Hylton	4/6/04	Herp array surveys	3.0
Michael Hylton	4/6/04	Herp array surveys	2.5
Markus Spiegelberg	4/6/04	Herp array surveys	6.0
Michael Hylton	4/7/04	Herp array surveys	3.0
Michael Hylton	4/7/04	Herp array surveys	2.5
Markus Spiegelberg	4/7/04	Herp array surveys	6.0
Michael Hylton	4/8/04	Herp array surveys	3.0
Michael Hylton	4/8/04	Herp array surveys	2.5
Markus Spiegelberg	4/8/04	Herp array surveys	6.0
Markus Spiegelberg	4/9/04	Herp array surveys	6.0
		Remove mustard with RECON crews along	
Michael Hylton	4/13/04	Cadencia	8.0
Markus Spiegelberg	4/13/04	Bird survey	6.0
Markus Spiegelberg	4/14/04	Bird survey	5.0
Michael Hylton	4/15/04	Public.outreach	1.0
Michael Hylton	4/15/04	Non-native plant removal	8.0
Michael Hylton	4/16/04	Chase 2 motorcycles off and file police report.	3.0
Michael Hylton	4/16/04	Patrol	1.0
Markus Spiegelberg	4/19/04	Bird survey	5.0
Michael Hylton	4/21/04	Patrol Box Canyon	2.0
Michael Hylton	4/22/04	Evict 4 people out of Box Canyon	3.0
Markus Spiegelberg	4/22/04	Bird survey, kill 50 artichoke thistle	7.0
Michael Hylton	4/23/04	Patrol choumas and other RLC preserves for litter.	1.5
Markus Spiegelberg	4/23/04	Site visit with city of carlsbad staff	2.0
Markus Spiegelberg	4/25/04	Bird survey. Patrol choumas	7.0
Michael Hylton	4/26/04	Patrol	1.0
Michael Hylton	4/27/04	Spray 30 pampas at greens	1.0
Michael Hylton	4/27/04	CAGN survey.	3.5
Michael Hylton	4/27/04	Spray 30 pampas at greens	1.0
Michael Hylton	4/27/04	Check on Orcutt's hazardia	1.0
Markus Spiegelberg	4/28/04	Bird survey	6.0
Michael Hylton	4/30/04	Patrol.	1.0
Michael Hylton	4/30/04	Patrol Elfin forest	1.0
Michael Hylton	4/30/04	Patrol choumass	1.0
Michael Hylton	5/3/04	Evict trespassers from box canyon	0.5
Michael Hylton	5/4/04	Repair box canyon gate	1.0
Markus Spiegelberg	5/4/04	Huff and browe r cagn survey	6.0
Michael Hylton	5/5/04	Distribute brochures	2.0
Michael Hylton	5/5/04	Patrol Box Canyon, evict 6 youth	1.5
Michael Hylton	5/5/04	Patrol Box Canyon, evict 7 youth	0.5

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Michael Hylton	5/7/04	Patrol	2.0
Markus Spiegelberg	5/10/04	Focused cagn survey	5.0
Markus Spiegelberg	5/11/04	Cagn survey	6.0
Markus Spiegelberg	5/12/04	box bird survey	3.0
Michael Hylton	5/14/04	Habitat plan	2.0
Markus Spiegelberg	5/14/04	Bird survey	6.0
Michael Hylton	5/15/04	Bird survey greens	4.0
Markus Spiegelberg	5/17/04	Bird survey	6.0
Michael Hylton	5/17/04	Kill 40 fennel	1.0
Markus Spiegelberg	5/18/04	cagn survey	6.0
		spray or cut 1/4 acre mustard, 20 tobacco, 125	
Michael Hylton	5/19/04	thistle and 7pampas at greens	3.0
Michael Hylton	5/19/04	Pass out brochures	1.0
Michael Hylton	5/19/04	Clean trash	3.0
Michael Hylton	5/19/04	Cut 4 tamarisk and 1 myoporum at Ridge	1.0
Michael Hylton	5/19/04	Post sign at Oaks	0.5
		Check nonnatives at greens, B. filifolia survey,	
Markus Spiegelberg	5/19/04	plant plots	4.0
Michael Hylton	5/19/04	Patrol choumas	1.0
Markus Spiegelberg	5/20/04	Huff brouwer cagn survey, greens plant plot work	8.0
Michael Hylton	5/22/04	Cadencia nature walk	3.0
Markus Spiegelberg	5/24/04	Open herp arrays	7.0
Markus Spiegelberg	5/25/04	Herp pit array survey	7.0
Michael Hylton	5/25/04	Herp pit array survey	5.0
Michael Hylton	5/25/04	Fuel management at Ridges	7.0
Michael Hylton	5/25/04	Public project; work with students on trail	1.0
Markus Spiegelberg	5/26/04	Herp pit array survey	7.0
Markus Spiegelberg	5/27/04	Herp pit array survey	7.0
Michael Hylton	5/27/04	Choumas patrol	1.0
Markus Spiegelberg	5/28/04	Herp pit array survey	6.0
Michael Hylton	6/2/04	Patrol Box Canyon, fix gate	1.0
		Spray fountain grass and fennel at RSF	
Michael Hylton	6/2/04	undercrossing	96.0
Michael Hylton	6/2/04	Cut fennel and mustard near Estera Street	7.0
Michael Hylton	6/2/04	Spray 17 pampas at RSF-Melrose intesection	1.5
Michael Hylton	6/2/04	Kill fountain grass near RSF undercrossing	1.0
		kill 1/2 acre fennel and spray pampas at west end	
Michael Hylton	6/2/04	of Box Canyon	1.5
Markus Spiegelberg	6/3/04	Brouwer wilern bird survey	5.0
		Spray 20 pampas and 100 fennel in lower box	
Michael Hylton	6/3/04	canyon	4.0
Michael Hylton	6/4/04	CAGN survey at Greens	4.0
Michael Hylton	6/9/04	Patrol Choumass	1.0
Michael Hylton	6/9/04	Patrol Elfin forest	0.5
Michael Hylton	6/10/04	Spray 30 pampas in lower Box Canyon	3.5
Michael Hylton	6/14/04	Post large wood sign along RSF	3.0
Michael Hylton	6/16/04	Spray 20 pampas in lower box canyon	2.0

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Markus Spiegelberg	6/17/04	Measure oh at greens, patrol huff	3.0
Markus Spiegelberg	6/22/04	Water oh at greens	2.0
Michael Hylton	6/23/04	Patrol	2.0
Michael Hylton	6/25/04	Patrol lower Box Canyon	3.0
Michael Hylton	6/28/04	Patrol Choumass	1.0
Markus Spiegelberg	6/28/04	Veg mapping choumass huff	3.0
Michael Hylton	6/30/04	Patrol greens	2.0
Michael Hylton	7/1/04	Spray 10 pampas at greens	8.0
Markus Spiegelberg	7/2/04	Set up ant transects	2.0
		Spray 20 pampas and 36 fennel in upper Box	
Michael Hylton	7/2/04	canyon	3.0
Michael Hylton	7/2/04	Clean large wood signs along RSF	3.0
Michael Hylton	7/2/04	Patrol oaks area	2.0
Markus Spiegelberg	7/7/04	Set up ant transects	2.5
Michael Hylton	7/7/04	Patrol choumass	
Markus Spiegelberg	7/8/04	Ant and horned lizard scat survey	5.0
Michael Hylton	7/9/04	Patrol oaks area	3.0
Michael Hylton	7/12/04	Post wood sign posts	1.5
Michael Hylton	7/12/04	Patrol huff property	0.5
Markus Spiegelberg	7/13/04	Ant transects horned lizard survey	3.0
Michael Hylton	7/15/04	Post wood sign posts	0.5
Michael Hylton	7/15/04	Spray 1/4 acre ice plant near Cadencia Park	1.0
Michael Hylton	7/15/04	Patrol Box Canyon	2.0
Michael Hylton	7/20/04	Sign denning road	2.0
Markus Spiegelberg	7/21/04	Patrol	3.0
Michael Hylton	7/22/04	Patrol Box Canyon	2.5
Michael Hylton	7/22/04	Post wood sign on San Elijo Road	0.5
Michael Hylton	7/22/04	Patrol Elfin forest	1.0
Markus Spiegelberg	7/23/04	Water orcutts hazardia 2000 gallons	2.0
Markus Spiegelberg	7/26/04	Open herp arrays	6.0
Michael Hylton	7/28/04	Patrol, arrest 5 individuals at Box Canyon	3.0
Michael Hylton	7/28/04	Herp pit array survey	4.0
Markus Spiegelberg	7/28/04	Herp pit array survey	6.0
Markus Spiegelberg	7/29/04	Herp pit array survey	6.0
Michael Hylton	7/29/04	Spray 25 fennel at west end of box canyon	1.5
Michael Hylton	7/29/04	Patrol box canyon	1.5
Michael Hylton	7/30/04	Spray 10 fennel at Elfin forest	1.0
Michael Hylton	7/30/04	Patrol.choumas	0.5
Markus Spiegelberg	7/30/04	Herp pit array survey	6.0
Michael Hylton	8/1/04	Patrol Box and evict 3 youth	3.0
Michael Hylton	8/3/04	Patrol Box Canyon	
Michael Hylton	8/6/04	Patrol Box Canyon	0.5
Michael Hylton	8/10/04	Patrol Box Canyon	1.0
Michael Hylton	8/10/04	Patrol along Denning road	1.0
Michael Hylton	8/10/04	Patrol huff property	1.0
Michael Hylton	8/10/04	Patrol choumas	1.0
Markus Spiegelberg	8/11/04	University commons walkthrough of new parcels	5.0

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Michael Hylton	8/16/04	Patrol	1.0
Michael Hylton	8/16/04	Patrol Elfin forest	0.5
Michael Hylton	8/16/04	Patrol	0.5
Michael Hylton	8/19/04	Patrol Box Canyon	1.0
Michael Hylton	8/20/04	Patrol Huff, eflin and choumas	2.0
Michael Hylton	8/23/04	Patrol greens	0.5
Michael Hylton	8/23/04	Patrol Huff and Choumass	1.0
Michael Hylton	8/30/04	Patrol Box canyon	1.0
Michael Hylton	9/1/04	Patrol and check on denning road fence and gate	2.0
Markus Spiegelberg	9/3/04	Water orcutts harzardia	1.0
Michael Hylton	9/3/04	Patrol greens and Melrose Drive areas.	2.0
Michael Hylton	9/7/04	Patrol Box Canyon, oaks and Huff.	2.0
Michael Hylton	9/13/04	Patrol Box Canyon	2
Markus Spiegelberg	9/20/04	Meet water district	1.0
Markus Spiegelberg	9/28/04	Measure orcutts hazardia	1.0

Appendix C. Plant Species List (Spring 2003)

SPECIES	COMMON NAME	STATUS	GREENS	ELFIN FOREST	UNIVERSITY COMMONS	OAKS & RIDGES
Acacia spp.*	Acacias				X	X
Acanthomintha ilicifolia	San Diego thornmint	1B 2-3-2 CE/FT	X			
Achillea millefolium	Yarrow		X	X	X	X
Achnatherum coronatum	Giant needlegrass					
Acourtia microcephala	Sacapellote		X		X	X
Adenostoma fasciculatum	Chamise		X	X	X	X
Adolphia californica	California spinebush	2 1-3-1	X	X	X	X
Adiantum jordanii	California maiden-hair fern			X	X	X
Agave americana	American Agave					
Agrostis diegoensis	Leafy bent grass			X	X	X
Allium praecox	Early onion		X	X	X	X
Amaranthus blitoides*	Prostrate amaranth					
Ambrosia psilostachya	Western ragweed		X	X	X	X
Amsinkia menziesii	Fiddleneck		X	X	X	X
Anagalis arvensis*	Scarlet Pimpernel		X	X	X	X
Anemopsis californica	Yerba manza		X		X	X
Antirrhinum nuttallianum	Nuttall's snapdragon		X	X	X	X
Antirrhinum kelloggii	Climbing snapdragon		X		X	X
Apiastrum angustifolium	Mock Parsley		X			X
Apium graveolens*	Celery					
Arctostaphylos glandulosa ssp. crassifolia	Del Mar manzanita	1B 3-3-2 FE	X			
Arctostaphylos glandulosa ssp. glandulosa	Manzanita		X			X
Artemisia californica	Coastal sagebrush		X			X
Artemisia douglasiana	Mugwort		X	X	X	X
Artemisia dracunculus	Tarragon					
Artemisia palmeri	Palmer's sagewort	4 1-2-1			X	X
Asclepias fascicularis	Narrow-leaf milkweed				X	X
Atriplex lentiformis	Quail saltbush					
Atriplex pacifica	Pacific saltbush	1B 3-3-2 FSC				
Atriplex semibaccata*	Australian saltbush		X	X	X	X

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SPECIES	COMMON NAME	STATUS	GREENS	ELFIN FOREST	UNIVERSITY COMMONS	OAKS & RIDGES
<i>Avena</i> spp.*	Wild oats		X	X	X	X
<i>Baccharis pilularis</i>	Coyote bush		X	X	X	X
<i>Baccharis salicifolia</i>	Mule fat		X	X	X	X
<i>Baccharis sarothroides</i>	Broom Baccharis		X	X	X	X
<i>Bloomeria crocea</i>	Common goldenstar		X			X
<i>Bothriochloa barbinodis</i>	Plumed beardgrass					
<i>Brassica geniculata</i> *	Short-podded mustard		X	X	X	X
<i>Brassica nigra</i> *	Black mustard		X	X	X	X
<i>Brickellia californica</i>	California Brickellbush		X	X	X	X
<i>Brodiaea filifolia</i>	Thread-leaf Brodiaea	1B 3-3-3 CE/FT	X			
<i>Brodiaea orcutii</i>	Orcutt's Brodiaea	1B 1-3-2 FSC		X	X	X
<i>Bromus carinatus</i>	California brome		X			X
<i>Bromus diandrus</i> *	Ripgut grass		X	X	X	X
<i>Bromus hordeaceus</i> *	Soft chess		X	X	X	X
<i>Bromus madritensis</i> ssp. <i>rubens</i> *	Foxtail chess		X	X	X	X
<i>Calandrinia ciliata</i>	Red maids		X	X	X	X
<i>Calochortus concolor</i>	Golden-bowl mariposa				X	X
<i>Calochortus splendens</i>	Splendid mariposa		X			X
<i>Calyptidium monandrum</i>	Pussy paws					X
<i>Calystegia macrostegia</i>	Morning-glory		X	X	X	X
<i>Camissonia bistora</i>	California sun cup		X			X
<i>Camissonia californica</i>	False mustard			X	X	X
<i>Capsella bursa-pastoris</i> *	Shepard's purse			X	X	X
<i>Cardamine californica</i>	Milkmaids		X		X	X
<i>Cardionema ramosissimum</i>	Tread lightly		X			
<i>Carex triquetra</i>	Triangular-fruit sedge		X		X	X
<i>Carpobrotus edulis</i> *	Sea-fig				X	X
<i>Castilleja densiflora</i>	Owl's clover		X			X
<i>Castilleja exserta</i>	Purple owl's clover		X	X	X	X
<i>Castilleja foliolosa</i>	Woolly Indian paintbrush					
<i>Caulanthus heterophyllus</i> var. <i>heterophyllus</i>	San Diego jewell flower			X	X	X
<i>Ceanothus tomentosus</i>	California lilac		X		X	X
<i>Ceanothus verrucosus</i>	Wart-stemmed Ceanothus	2 2-2-1 FSC	X		X	X
<i>Centaurea calcitrapa</i> *	Purple star-thistle		X			X
<i>Centaurea melitensis</i> *	Tocalote		X	X	X	X
<i>Centaureum venustum</i> *	Canchalagua		X	X	X	X
<i>Centunculus minimus</i>	Common chaffweed		X			

Center for Natural Lands Management

SPECIES	COMMON NAME	STATUS	GREENS	ELFIN FOREST	UNIVERSITY COMMONS	OAKS & RIDGES
<i>Cerastium glomeratum</i> *	Mouse-ear chickweed		X	X	X	X
<i>Cercocarpus minutiflorus</i>	San Diego mountain-mahogany		X		X	X
<i>Chaenactis artemisifolia</i>	White pincushion			X		X
<i>Chaenactis glabriuscula</i>	Yellow pincushion		X	X	X	X
<i>Chamaesyce polycarpa</i>	Small-seed sandmat		X	X	X	X
<i>Chamomilla suaveolens</i> *	Pineapple weed		X	X		X
<i>Chenopodium californicum</i>	California goosefoot		X	X	X	X
<i>Chenopodium murale</i> *	Nettle-leaf goosefoot					X
<i>Cheilanthes newberryi</i>	Cotton fern				X	X
<i>Chlorogalum parviflorum</i>	Small-flower soap plant		X	X	X	X
<i>Chorizanthe fimbriata</i>	Fringed spineflower					X
<i>Chorizanthe procumbens</i>	Prostrate spineflower		X	X	X	X
<i>Chorizanthe staticoides</i>	Turkish rugging		X			X
<i>Chrysanthemum coronarium</i> *	Chrysanthemum		X			X
<i>Cirsium occidentale</i> var. <i>californicum</i>	California thistle		X		X	X
<i>Clarkia purpurea</i> ssp. <i>viminea</i>	Large Clarkia				X	X
<i>Claytonia perfoliata</i>	Miner's lettuce		X	X	X	X
<i>Clematis pauciflora</i>	Ropevine		X	X	X	X
<i>Cneoridium dumosum</i>	Spice bush		X	X	X	X
<i>Collinsia heterophylla</i>	Purple Chinese houses		X	X	X	X
<i>Comarostaphylis diversifolia</i> ssp. <i>diversifolia</i>	Summer-holly	1B 2-2-2 FSC	X	X		
<i>Conium maculatum</i> *	Poison hemlock					
<i>Convolvulus arvensis</i> *	Bindweed		X		X	X
<i>Convolvulus simulans</i>	Clay bindweed	4 1-2-2	X		X	X
<i>Conyza canadensis</i> *	Horseweed		X	X	X	X
<i>Cordylanthus rigidus</i>	Dark-tip bird's-beak		X		X	X
<i>Cortaderia jubata</i> *	Pampass grass		X	X	X	X
<i>Cotula coronopifolia</i> *	Brass-buttons		X		X	X
<i>Crassula connata</i>	Pygmy weed		X	X	X	X
<i>Cressa truxillensis</i>	Alkali weed					
<i>Cryptantha intermedia</i>	Porcorn flower		X	X	X	X
<i>Cucurbita foetidissima</i>	Calabazilla					
<i>Cuscuta californica</i>	Dodder		X	X	X	X
<i>Cynara cardunculus</i> *	Artichoke thistle		X			X
<i>Cynodon dactylon</i> *	Bermuda grass					
<i>Cyperus involucratus</i>	African umbrella plant		X	X	X	X
<i>Datura wrightii</i>	Jimson weed		X			X
<i>Daucus pusillus</i>	Rattlesnake weed		X			X

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Delphinium parryi ssp. parryi	Parry's larkspur		X	X	X	X
Dichelostemma capitatum	Blue dicks		X	X	X	X
Dichondra occidentalis	Western Dichondra	4 1-2-1	X	X	X	X
Distichlis spicata	Saltgrass		X		X	X
Dodecatheon clevelandii	Shooting star		X	X	X	X
Dryopteris arguta	Coastal wood fern		X	X	X	X
Dudleya edulis	Lady-fingers					
Dudleya lanceolata	Coastal Dudleya		X			X
Dudleya pulverulenta	Chalk Dudleya		X	X	X	X
Dudleya viscida	Sticky-leaf Dudleya	1B 2-2-3 FSC				X
Echium sp.*	Echium					
Eleocharis macrostachya	Pale spike-sedge		X		X	X
Elymus spp.	Native wild rye grasses		X		X	X
Emmenanthe penduliflora	Whispering bells		X		X	X
Encelia californica	California Encelia		X	X	X	X
Encelia farinosa	Incienso					X
Epilobium canum	California Fuchsia		X	X	X	X
Eremocarpus setigerus	Doveweed		X	X	X	X
Erigeron foliosus var. foliosus	Leafy daisy		X		X	X
Eriodictyon crassifolium	Thick-leaved Yerba Santa					
Eriogonum elongatum	Tall buckwheat		X		X	X
Eriogonum fasciculatum	Flat-top buckwheat		X	X	X	X
Eriophyllum confertiflorum	Long-stem golden-yarrow		X	X	X	X
Erodium cicutarium*	Red-stem filaree		X	X	X	X
Erodium moschatum*	White-stem filaree		X	X	X	X
Eschscholzia californica	California poppy		X	X	X	X
Eucalyptus spp.*	Eucalyptus trees		X			X
Eucrypta chrysanthemifolia	Eucrypta		X	X	X	X
Euphorbia misera	Cliff spurge	2 2-2-1				
Euphorbia spathulata	Reticulate-seed spurge		X			
Filago arizonica	Arizona Filago		X	X	X	X
Filago californica	California Filago		X	X	X	X
Filago gallica*	Narrow-leaf Filago		X	X	X	X
Foeniculum vulgare*	Sweet Fennel		X	X	X	X
Fritillaria biflora	Chocolate lily		X			X
Galium angustifolium	Narrow-leaved bedstraw		X	X	X	X

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Galium aparine*	Common Bedstraw		X	X	X	X
Gastridium ventricosum*	Nit grass		X	X	X	X
Gilia angelensis	Grassland Gilia		X	X	X	X
Gnaphalium bicolor	Bicolor cudweed					
Gnaphalium californicum	California everlasting		X	X	X	X
Gnaphalium canescens	White everlasting		X		X	X
Gnaphalium microcephalum	Small-flowered everlasting			X	X	X
Gnaphalium palustre	Everlasting		X			X
Grindelia camporum	Gumplant		X			
Gutierrezia sarothrae	Matchweed					X
Harpagonella palmeri	Palmer's grappling hook	4 1-2-1	X			
Hazardia squarrosa	Saw-toothed goldenbush		X	X	X	X
Hedypnois cretica*	Crete Hedypnois		X	X	X	X
Helianthemum scoparium*	Rush-rose		X	X	X	X
Helianthus gracilentus	Slender sunflower				X	X
Heliotropium curassavicum	Salt heliotrope					
Hemizonia fasciculata	San Diego tarplant		X	X	X	X
Hesperevax sparsiflora var. sparsiflora	Erect Evax		X			
Heteromeles arbutifolia	Toyon		X	X	X	X
Heterotheca grandiflora	Telegraph weed		X		X	X
Hypochaeris glabra*	Smooth cat's-ear		X			X
Hirschfeldia incana*	Shortpod mustard		X			X
Hordeum murinum*	Wild barley					X
Hypochaeris glabra*	Smooth cat's-ear		X	X	X	X
Isocoma menziesii	Goldenbush		X	X	X	X
Isomeris arborea	Bladderpod		X			X
Iva hayesiana	San Diego marsh-elder	2 2-2-1 FSC	X		X	X
Jepsonia parryi	Coast Jepsonia		X	X	X	X
Juncus acutus ssp. leopoldii	Southwestern Spiny Rush	4 1-2-1	X		X	X
Juncus bufonius	Toad rush		X		X	X
Juncus dubius	Mariposa rush		X		X	X
Juncus xiphioides	Iris-leaved rush				X	X
Keckiella cordifolia	Climbing bush Pestemon				X	X
Lactuca serriola*	Wild lettuce		X	X	X	X
Lamarckia aurea*	Goldentop		X	X	X	X
Lasthenia californica	Common goldfields		X	X	X	X
Lathyrus laetiflorus	San Diego sweet pea		X	X	X	X

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SPECIES	COMMON NAME	STATUS	GREENS	ELFIN FOREST	UNIVERSITY COMMONS	OAKS & RIDGES
<i>Layia playglossa</i>	Common tidy-tips				X	X
<i>Lepidium lasiocarpum</i>	Sand peppergrass		X			
<i>Lepidium nitidum</i>	Shinning peppergrass		X	X	X	X
<i>Lessingia filaginifolia</i> var. <i>filaginifolia</i>	San Diego sand-aster		X	X	X	X
<i>Leymus condensatus</i>	Giant wild rye		X	X	X	X
<i>Linanthus dianthiflorus</i>	Ground pink					X
<i>Linaria canadensis</i>	Blue toadflax		X	X	X	X
<i>Lobularia maritima</i> *	Sweet alyssum				X	X
<i>Lolium spp.</i> *	Ryegrass		X	X	X	X
<i>Lomatium dasycarpum</i>	Woolly-fruit Lomatium		X	X	X	X
<i>Lonicera subspicata</i>	San Diego honeysuckle		X	X	X	X
<i>Lotus hamatus</i>	Grab lotus		X	X		
<i>Lotus purshianus</i>	Spanish clover				X	X
<i>Lotus scoparius</i>	Deerweed		X	X	X	X
<i>Lotus strigosus</i>	Annual Lotus				X	X
<i>Lupinus bicolor</i>	Bicolored lupine		X		X	X
<i>Lupinus concinnus</i>	Bajada lupine			X		X
<i>Lupinus hirsutissimus</i>	Stinging lupine		X		X	X
<i>Lupinus truncatus</i>	Collar lupine		X			X
<i>Lycium andersonii</i>	Waterjacket		X			X
<i>Lythrum hyssopifolium</i> *	Grass poly				X	X
<i>Malacothamnus fasciculatus</i>	Bushmallow		X	X	X	X
<i>Malosma laurina</i>	Laurel sumac		X	X	X	X
<i>Malva parviflora</i> *	Cheeseweed					
<i>Mammillaria dioica</i>	Fish-hook cactus					
<i>Marah macrocarpus</i>	Wild-cucumber		X	X	X	X
<i>Marrubium vulgare</i> *	Horehound		X	X	X	X
<i>Matricaria matricarioides</i> *	Pineapple weed					
<i>Medicago officinales</i> *	Yellow sweetclover		X			X
<i>Medicago polymorpha</i> *	Bur-clover		X			X
<i>Melica imperfecta</i>	Coast range melic		X	X	X	X
<i>Melilotus albus</i> *	White sweetclover		X		X	X
<i>Melilotus indica</i> *	Yellow sweet clover					
<i>Mesembryanthemum crystallinum</i> *	Crystalline iceplant					
<i>Mesembryanthemum nodiflorum</i> *	Slender-leaved iceplant					
<i>Microseris elegans</i>	Elegant Microseris		X		X	X
<i>Mimulus aurantiacus</i>	Coast monkey flower		X	X	X	X
<i>Mimulus guttatus</i>	Seep monkey flower		X		X	X
<i>Mirabilis californica</i>	Coastal wishbone plant		X	X	X	X

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Muhlenbergia microsperma	Littleseed muhly					X
Muilla clevelandii	San Diego goldenstar	1B 2-3-2 FSC		X		X
Muilla maritima	Common muilla		X	X	X	X
Nemophila menzeisii	Baby blue eyes		X			X
Nasella pulchra	Purple needlegrass		X	X	X	X
Navarretia hamata	Skunkweed		X	X	X	X
Nerium oleander*	Oleander				X	X
Nicotiana glauca*	Tree Tobacco		X	X	X	X
Ophioglossum californicum	California adder's-tongue			X		X
Opuntia ficus-indica*	Indian-fig		X		X	X
Opuntia littoralis	Coastal prickly-pear		X	X	X	X
Opuntia prolifera	Cholla		X			
Osmadenia tenella	Osmadenia		X	X	X	X
Oxalis pes-caprae*	Bermuda-buttercup		X		X	X
Oxalis albicans	California wood-sorrel		X	X	X	X
Paeonia californica	California Peony		X			X
Pectocarya linearis	Slender Pectocarya			X	X	X
Pellaea mucronata	Bird's foot cliff-brake					
Pentachaeta aurea	Golden-rayed Pentachaeta		X		X	X
Pentagramma triangularis ssp. triangularis	Goldenback fern			X		X
Pentagramma triangularis ssp. viscosa	Silverback fern				X	X
Phacelia cicutaria	Caterpillar Phacelia		X	X	X	X
Phacelia distans	Wild-Heliotrope		X		X	X
Phacelia parryi	Parry's Phacelia			X	X	X
Phalaris spp.*	Canary grasses		X	X	X	X
Pholistoma auritum	Fiesta flower		X	X	X	X
Pholistoma racemosum	Fiesta flower					X
Picris echioides*	Bristly ox-tongue		X	X	X	X
Pinus torreyana	Torrey pine	1B 2-3-2 FSC				
Plagiobothrys acanthocarpus	Adobe popcornflower					
Plagiobothrys nothofulvus	Rusty popcorn flower				X	X
Plagiobothrys sp.	Popcorn flower		X			X
Plantago erecta	Dot-seed plantain		X	X	X	X
Plantago ovata*	Woolly plantain		X			
Plantago virginica*	Dwarf Plantain		X			
Platanus racemosa	California sycamore		X			X
Platystemon californicus	Cream cups		X		X	X

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SPECIES	COMMON NAME	STATUS	GREENS	ELFIN FOREST	UNIVERSITY COMMONS	OAKS & RIDGES
Pluchea odorata	Salt marsh fleabane					
Polygonum arenastrum*	Common knotweed					
Polypodium californicum	California polypody		X	X	X	X
Polypogon spp.*	Beard grass		X	X	X	X
Porophyllum gracile	Odora			X	X	X
Potentilla glandulosa	Sticky cinquefoil		X	X	X	X
Prunus ilicifolia	Holly-leaved cherry					
Pterostegia drymarioides	Granny's hairnet		X	X	X	X
Quercus agrifolia	Coast live oak		X	X	X	X
Quercus berberidifolia	Inland scrub oak		X	X	X	X
Quercus dumosa	Nuttall's Scrub Oak	1B 2-3-2	X	X	X	X
Rafinesquia californica	California chicory		X	X		X
Rhamnus crocea	Spiny redberry		X			X
Rhamnus ilicifolia	Holly-leaf redberry		X		X	X
Rhaphanus sativa*	Wild radish		X	X	X	X
Rhus integrifolia	Lemonade-berry		X	X	X	X
Ribes indecorum	Winter currant			X	X	X
Ribes speciosum	Fuchsia-flowered gooseberry		X		X	X
Rorippa nasturtium-aquaticum*	Water-cress		X		X	X
Rosa californica	California wild rose				X	X
Rumex crispus*	Curly dock		X		X	X
Rumex sp.*	Dock		X	X	X	X
Salicornia virginica	pickleweed		X			
Salix spp.	Willows		X			X
Salsola tragus*	Tumbleweed		X	X	X	X
Salvia apiana	White sage		X	X	X	X
Salvia columbariae	Chia		X			X
Salvia mellifera	Black sage		X	X	X	X
Sambucus mexicana	Blue elderberry		X	X	X	X
Sanicula arguta	Sharp-tooth sanicle			X	X	X
Sanicula bipinnatifida	Purple sanicle				X	X
Schinus molle*	Peruvian pepper tree				X	X
Schismus barbatus*	Mediterranean Schismus		X	X	X	X
Scirpus californicus	California bulrush		X		X	X
Scrophularia californica	California figwort				X	X
Scutellaria tuberosa	Danny's skullcap					
Selaginella bigelovii	Bigelow's spike-moss			X	X	X
Selaginella cinerascens	Ashy spike-moss		X	X	X	X
Senecio californicus	California groundsel					X
Senecio vulgaris*	Common groundsel		X	X	X	X
Sidalcea malvaeflora	Checker-bloom		X	X	X	X
Silene gallica*	Common catchfly		X	X	X	X
Silene laciniata	Fringed Indian pink				X	X

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<i>Silybum marianum</i> *	Milk-thistle					
<i>Sisymbrium irio</i> *	London rocket					
<i>Sisyrinchium bellum</i>	Blue-eyed-grass		X	X	X	X
<i>Solanum douglasii</i>	Douglas' nightshade		X			X
<i>Solanum xanti</i>	Nightshade		X	X	X	X
<i>Sonchus oleraceus</i> *	Common sow-thistle		X		X	X
<i>Spergula arvensis</i> *	Stickwort starwort					
<i>Spergularia macrotheca</i>	Sticky sand-spurry					
<i>Spergularia villosa</i> *	Villous sand-spurry		X		X	X
<i>Stachys ajugoides</i>	Hedge nettle		X	X	X	X
<i>Stephanomeria diegensis</i>	San Diego wreath-plant		X	X	X	X
<i>Stylocline gnaphalioides</i>	Everlasting nest-straw		X	X	X	X
<i>Stylomecon heterophylla</i>	Wind poppy				X	X
<i>Tamarix spp.</i> *	Salt cedars		X	X		X
<i>Thalictrum polycarpum</i>	Many-fruit meadow-rue		X	X	X	X
<i>Toxicodendron diversilobium</i>	Poison oak		X	X	X	X
<i>Trichostema lanceolatum</i>	Vinegar weed		X			X
<i>Typha spp.</i>	Cat-tail		X		X	X
<i>Trifolium microcephalum</i>	Maiden Clover		X	X	X	X
<i>Trifolium depauperatum</i>	Clover		X			X
<i>Uropappus lindleyi</i>	Silver puffs		X	X	X	X
<i>Urtica urens</i> *	Dwarf nettle					
<i>Venegasia carpesioides</i>	Canyon sunflower				X	X
<i>Verbena lasiostachys</i>	Western Verbena		X		X	X
<i>Vicia ludoviciana</i> *	Deerpea vetch		X		X	X
<i>Viguiera laciniata</i>	San Diego sunflower	4 1-2-1		X		X
<i>Viola pedunculata</i>	Johnny jump-ups		X	X	X	X
<i>Vulpia myuros</i> *	Foxtail fescue		X			X
<i>Washingtonia filifera</i>	California fan palm		X	X	X	X
<i>Xanthium strumarium</i> *	Cocklebur		X		X	X
<i>Xylococcus bicolor</i>	Mission manzanita		X	X	X	X
<i>Yucca schidigera</i>	Mojave Yucca		X		X	X
<i>Yucca whipplei</i>	Our lord's candle		X	X	X	X
<i>Zygadenus fremontii</i>	Fremont's Camas		X	X	X	X

* Denotes non-native plant

